

# Daily GLOWBUGS

## Digest: V1 #9

via AB4EL Web Digests @ SunSITE

**Purpose: building and operating vacuum tube-based QRP rigs**

[AB4EL Ham Radio Homepage @ SunSITE](#)

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**Subject: glowbugs V1 #9**

**glowbugs**

**Thursday, April 17 1997**

**Volume 01 : Number 009**

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Date: Wed, 16 Apr 1997 08:22:00 PDT

From: "Jeff Duntemann" <jeffd@coriolis.com>

Subject: Re: AMECO TX-62 and 6M AM

John--

Apparently Petersen Radio is still in business selling FT243's, and we have a startup in Nevada called Phoenix Crystals doing the same general thing. Contact information for both has been posted on the list here in recent days; Petersen Radio as recent as yesterday, if I recall. Bryan Carling has a nice page of contact info and other ham things:

<http://www.mnsinc.com/bry/hamfiles.htm>

Petersen Radio is on his list.

On the other hand, if you have crystals you should be able to create a simple untuned Pierce oscillator and either sniff it with a counter or tune for the fundamental with a well-calibrated receiver. I have a little gizmo in a candy box which is nothing more than a 1-FET pierce oscillator with an FT243 socket. I built it back when I was trying to alter crystals by grinding or rubbing solder on them, around 1974 or so. It worked beautifully. I may still have it but it's probably at the bottom of a box somewhere. I think I got the circuit out of the '74 ARRL Handboook.

If your crystals are intended for overtone operation I'm less sure how to proceed, but for fundamental mode a Pierce oscillator is all you need.

Good luck with it and let us know how you do.

- --73--

- --Jeff Duntemann KG7JF

Scottsdale, Arizona

>I've got a similar problem with my WRL TC-6A: I've got a TON of  
>crystals, but only a handful of them labeled and not much confidence  
>in the labels. Anyone know how I can get them identified and,  
>possibly, reground?

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Date: Wed, 16 Apr 1997 08:25:45 PDT  
From: "Jeff Duntemann" <jeffd@coriolis.com>  
Subject: Where to get those 8400kc crystals for 50.4...

Hi gang--

Below is a message I received from Phoenix Crystals, pertinent to recent discussions about where to get crystals for 6m AM operation.

Now, I already have four or five 8400 rocks and don't really need any more, but those interested in getting a rig going on 6m AM should consider a group buy from Phoenix. We want to keep him in business as long as possible...

- --73--

- --Jeff Duntemann KG7JF  
Scottsdale, Arizona

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Hi Jeff, A friend of mine forwarded your mail where you were asking for a source of 8.4 Mhz. FT-243 xtals, I make them and can provide one on this frequency for \$6.00 plus \$2.00 shipping. I don't know if your interested in any other freqs. or not but the shipping would pay for shipping several at once.

I'm also running a special "group buy" on several different frequency groups for the QRP'ers. 7005 thru 7060, and 7105 thru 7140 khz. If you might be interested in any of those I could forward you a copy of the listing.

73  
John Morris  
Phoenix Crystal  
1714 North Ash St.  
Nevada, MO 64772  
1-417-667 6179 after 6 PM CDST

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Date: Wed, 16 Apr 1997 13:27:59 -0400 (EDT)  
From: EWoodman@aol.com  
Subject: Historical Rado Gear?

You folks will have to forgive me as I tend to go off on a tangent now and again. My daughter ( who is 12 and studying for her license) and I were talking about old radio gear, specifically having to do with the Titanic and Amelia Earhart. Don't want to clutter up the list but since this is sort of a

Does anyone here know exactly what type of wireless gear was carried aboard the Titanic and also on Amelia Earhart's plane? The literature describes the wireless activity associated with each of these events but we have yet to find any specific details about the equipment.

Date: Wed, 16 Apr 1997 14:13:08 -0400  
From: Adam Liette <kb8ydx@geocities.com>  
Subject: [none]

tnx

\$30.00 plus shipping

Inquire to AF4K at



say, am I right or wrong here?

73,  
Mike, KK6GM

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Date: Thu, 17 Apr 1997 02:49:33 -0500  
From: Conard Murray <ws4s@InfoAve.Net>  
Subject: Re: Marconi Day

>Hello, fellow HF operators!

>

>This Saturday, April 19 1997, several World wide stations will be operating  
>International Marconi Day. This special event is here to celebrate the birth  
>of Marconi, the father of radio. The event starts on 0000 GMT April 19, and  
>runs through the 24 hour period ending on 2359 GMT April 20. QSL cards will  
>be sent to those who make contact with the stations signing /IMD, and  
>certificates will be sent to those who make many QSOs with IMD stations.  
>This event will start on Friday night local for North American stations, and  
>run through Saturday.

>

>The frequencies will be 7037 KHz and 10121 KHz for W6KB/IMD. This station  
>will be transmitting from Bolinas, California with a 1959 Collins 30K-5  
>running 300 watts output on 40, and 200 on 30. The transmitting antenna will  
>be a 6 MHz dipole 80 feet above the coastal cliff. The cliff itself is 150  
>feet above the Pacific Ocean. For receiving, we will be 17 miles north of  
>Bolinas, in Point Reyes, California. We will key the transmitter remotely  
>for perfect QSK. The site at Point Reyes employs multiple top-notch  
>commercial grade WJ receivers and many directive antennas pointing in a  
>multitude of directions. An identical site will be on the East coast, in  
>Cape Cod, Massachusetts. We will control the East Coast site also via remote  
>control, thanks to T1 lines. This affords us complete reception of all signals.

>

>Because of this, all stations are welcome. DX stations and QRPpppppp  
>operators, this may be your golden opportunity! Last year, one of our  
>operators worked a ham in Colorado running 250 mW from a 49er Transceiver.  
>All QSOs welcome.

>

>Thanks for reading our announcement, and we hope to hear you out there on  
>our frequencies.

>

>Adam McLaughlin, KD6POC@jps.net

>

>

>

>Adam McLaughlin KD6POC

>QRG: 7037 KHz

>kd6poc@jps.net OR kd6poc@qsl.net

>http://www.jps.net/jmclaugh

>

>

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Date: Thu, 17 Apr 1997 09:48:44 -0400  
From: "Greg Parsons A.K.A. Rat" <gregp@MIS.Net>

**Subject: simple 80m transmitter**

Hi gang,

Well I had time to kill last night, so I was looking thru a copy of the 1954 radio amateurs handbook. What did I find but a nice little rock bound 80m set, look on page 154 for the start, the unit uses a single 6AG7, power supply uses a 5Y3GT. And if that wasn't enough there is a following article on how to build a 807 amp for this little unit!! Bob, if you have the '54 handbook would you look it over and give an opinion on it.

73,

Greg  
ke4ooo

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Greg Parsons	KE4000	gregp@mis.net	gregp@lfucg.com	gregp@stdio.com
AMI #865	DoD 862	Who has the coffee? Better yet, who has the Ale8one?		
NRA Life, SCCA, SCA	http://www.stdio.com/~gregp		http://www.lfucg.com	
"Religiones antiquae et arma ridiculae non comparant cum bono telo eruptionis igneae latero te, puer." Hanno Solare				

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Date: Thu, 17 Apr 1997 10:57:41 -0400

From: "Ornitz, Barry" <ornitz@eastman.com>

Subject: RE: Fly in the ointment (was Core saturation musings)

No you did not miss anything, Mike. The "compliance" of the constant current supply will need to be greater than the audio swing on the winding you use. For your case, a solid-state supply of about 50 volts compliance would be used. Using a series transistor, the voltage not going into bucking the winding voltage multiplied by the current would be dissipated as heat.

Bill Hawkins mentioned another way around this, i.e. using another choke to block the audio from the DC current supply. This choke would be required to be at least the critical inductance at the lowest audio frequency of interest to maintain the current throughout the full audio swing. This choke would be fairly low inductance but be required to handle the current.

Compare this to using a choke in the HV lead to the RF final and coupling the audio in through a capacitor. Again no DC on the audio transformer. Now the choke will require much more inductance but operate at a lower current. Thermodynamics in action! You cannot win. [I wonder which circuit would win, pound for pound?]

Actually what you have done is used the turns ratio to transform impedances by dropping the voltage requirements and increasing the current requirements. [You have also gotten some of us to exercise our brain cells. Thanks!]

73, Barry L. Ornitz WA4VZQ ornitz@tricon.net

>From: mjsilva@ix.netcom.com [SMTP:mjsilva@ix.netcom.com]

>

>The devil is in the details as they say, and I've just found him. In

>the discussion about counteracting DC core magnetization using an

>unused winding it was pointed out that the current supply would have to  
>have high impedance to avoid shorting out the audio. On further  
>thought that seems to be a big problem. Sure, it would be easy enough  
>to design a constant current source, but now it's got to drive some  
>substantial current (lets say an amp) not statically through a winding  
>of very low resistance, but dynamically against an AC voltage which the  
>modulator winding is trying to induce into it. Again taking some  
>"typical" numbers, if we have a 10:1 ratio of "secondary" (the winding  
>supplying the PA) to "offset" (the winding we're using to eliminate the  
>DC effect), and if we're swinging the secondary 400v p-p (assuming a  
>400v plate supply), we've got to swing our 1 amp supply around 40v p-p,  
>right? (actually a little more because of losses). Hmmm, 1 amp at 40v  
>p-p -- sounds like I've just added another modulator's worth of audio  
>power requirement. Double checking, if our PA DC input is 40 watts  
>(400v @ 100mA), our modulator will need to supply about 15 watts. 40v  
>p-p is about 15v rms, times 1 amp is another 15 watts. Rats! So, what  
>say, am I right or wrong here?  
>  
>73,  
>Mike, KK6GM  
>

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Date: Thu, 17 Apr 1997 10:31:33 -0500  
From: Conard Murray <ws4s@InfoAve.Net>  
Subject: Re: simple 80m transmitter

At 09:48 AM 4/17/97 -0400, Greg Parsons A.K.A. Rat wrote:

>Hi gang,  
> Well I had time to kill last night, so I was looking thru a copy of the  
>1954 radio amateurs handbook. What did I find but a nice little rock bound  
>80m set, look on page 154 for the start, the unit uses a single 6AG7, power  
>supply uses a 5Y3GT. And if that wasn't enough there is a following article  
>on how to build a 807 amp for this little unit!! Bob, if you have the '54  
>handbook would you look it over and give an opinion on it.

Hi Greg et. al.

I am not Bob, but this was the first circuit I ever built waaay back as a newly-licensed General class in 1979. I used a surplus Tektronics power supply for mine and built it inside a steel (ouch!) chassis that someone gave me. I still remember trying to get the hole for the meter cut in the front panel of that steel chassis. The circuit works great, especially with a TV colorburst rock. I tapped the coil and used it on 40M too. It is about as simple as you could get and it even worked the first time I applied the power. Well, almost the first time .... I had a dead 6AG7 the first time. It sure felt great to see that little xmas tree lamp dummy load light up when I keyed the rig! I worked quite a few stations with that oscillator using my TS-820S as a receiver. I think this circuit would be an excellent glowbug project. The 6AG7 is a pretty hefty tube that will take all sorts of abuse and keep going. I have a few extra 6AG7's here if anyone wants to play with the circuit.  
73,  
de Conard WS4S

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End of glowbugs V1 #9  
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Created by **Steve Modena, AB4EL**  
Comments and suggestions to **modena@SunSITE.unc.edu**

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